

REMARKS/ARGUMENTS

Claims 18 and 21-27 are pending. Claim 20 has been canceled.

Claims 24, 18, 20, and 21 were rejected under 35 U.S.C. Section 103 in view of Uemura (U.S. Patent No. 6,331,450) and Shimada et al. (U.S. Patent No. 6,084,635).

Claims 25-27 were rejected under 35 U.S.C. Section 103 in view of Uemura and Sasaki et al. (JP Application No. 2002-9111A).

As previously discussed, an aspect of the present invention is the particular sequence of curing/baking steps using three temperatures. Independent claim 24 recites in pertinent part:

- (a) sealing the semiconductor device in a package by surrounding it with thermosetting resin and thermally curing the resin at a first temperature;
- (b) baking the thermosetting resin at a second temperature not higher than the first temperature;
- (c) further baking the thermosetting resin at a third temperature higher than the first temperature, wherein the third temperature is between about 220°C and about 260°C; and (emphasis added)

The examiner correctly noted that Uemura is silent as to “baking the thermosetting resin at a third temperature higher than the first temperature, wherein the third temperature is between about 220°C and about 260°C.” The examiner cited Shimada for allegedly supplying the missing teaching, citing Fig. 6 and the corresponding text.¹ Applicant respectfully disagrees.

Fig. 6 of Shimada is a temperature graph that clearly shows a “post-baking” region at a temperature of no more than 200° C. The description of Fig. 6, likewise, clearly explains raising the temperature for a post-baking step to 200° C:

In this embodiment, in the step of hardening the acrylic resin diluted with the solvent by heat to form the inter-layer insulating film 9 having the contact hole 10, pre-baking was performed at 90° C. for five minutes in the course of raising the substrate temperature from room temperature to a post-baking temperature, and then the substrate temperature was again raised to the post-baking temperature (200° C.).

Col. 8, lines 19-25.

¹ The Office action cited column 19, lines 13-31. However, the description of Fig. 6 begins at column 8, line 13.

Shimada, therefore, fails to remedy the teaching that is lacking in Uemura, and so the combined teachings fail to render obvious the claimed combination of temperatures recited in claim 24. The combination of Uemura and Shimada do not render obvious the recited "curing at a 1st temperature, followed by baking at a 2nd temperature that is less than the 1st temperature, followed by baking at a 3rd temperature greater than the 1st temperature and between 220°C and about 260°C" of claim 24.

Reconsideration of the claims in view of the foregoing is respectfully requested.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,

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